one of the least known and darkest parts of Africa though nearer to Europe than any other African land. All this is being changed under French rule. Wireless telegraphy connects all parts of the country, and over 8,000 miles of telegraph wire has been strung. Agricultural, horticultural, arboricultural, veterinary, and meteorological services have been established, and agricultural fairs are held. Some railroads also are building.

The French have, thus far, extended their influence chiefly in the Atlantic and Mediterranean ports and their wide hinterland, covering about half of the best part of the country.

At the head of the whole project stands General Lyautey, Resident General, a man of great tact and resource, under whose direction all phases of the work have gone steadily forward.

The book contains a store of information on topics relating to the protectorate, the excellent relations between the French and the natives, property and the methods of transferring it, principal towns and ports, river navigation, highways, agriculture, forests, industries, commerce, and finances. All the information on physical features and climate is to be found in the chapter headed "Agriculture." These natural factors, on which development so largely depends, are scantily treated; but the outlines of topography and weather and their effects upon the people and their enterprises are briefly noted.

The population of the entire French zone is estimated at 5,400,000. Most of Morocco is under French control; but Tangier, the leading port, is under international management, and a comparatively small area, partly in the north (the Rif) and partly in the extreme south (Rio de Oro), is governed by Spain.

France is improving Moroccan methods of tillage. The book shows that good plowing is beginning to supplant skin-deep cultivation. The scythe and harvesting machinery are coming in. Intensive cultivation will be the rule. The government intends to give the poorer people a chance to acquire small holdings so that they may support their families on their own plots of ground. Forestry methods will be introduced to provide future wood crops; and all the domestic animal industries will be encouraged, for they have large possibilities. Morocco is thus making progress in many ways.

For an article on the same topic as this book see A. de Tarde: The Work of France in Morocco, in the *Review*, Vol. 8, 1919, pp. 1-30. CYRUS C. ADAMS

THE FUTURE OF INDIA

WILLIAM ARCHER. **India and the Future.** 326 pp.; ills., index. Alfred A. Knopf, New York, 1918. $3.00. 9½ x 6 inches.

Mr. Archer has given to the public a new outlook of the Indian people and their progress. The entire theme of the story is based on the faith that a rational movement towards nationalism exists and that a stable world order is attainable. India is taken as a test case. If the people living south of the Himalayas can be emancipated from superstition and can take their place among the nations of the earth, then, the author believes, the problems of race and nationality which are being thrust upon the world today are capable of a solution which will be just and final. If, on the other hand, a weak nation (India) is always to be encroached upon by a strong nation (England) then any attempt to seek a solution to international problems is almost futile. In trying out the test case many sides of the Indian people are considered: its capabilities for being a united nation; its possibilities of rising above its religion; the success of any social reform movement to free the land from caste and its subsidiary evils; the use of the present Indian opposition to foreign rule; and the tendency of India's art, culture, and religion. In the discussion a splendid balance is attained. Praise and appreciation are mingled with just censure. The real achievements of India excite the author's ardent admiration, but the "multitudinous nightmares of its indigenous cults" are displayed in all their rawness. In the final analysis, however, Mr. Archer is looking forward to the end of British rule in India, the beginning of which was "the most heroic adventure in history." He takes the stand that English rule is a means, not an end; that it is not good in itself but is infinitely better than things as they were; and that, while the time has not yet come when this overlordship can be terminated, the face of the Indian service should be turned definitely towards educating the Hindu to assume the responsibilities of national life. ROBERT M. BROWN

THE WORLD'S FOOD SUPPLY

V. C. FINCH AND O. E. BAKER. **Geography of the World's Agriculture.** 149 pp.; maps, diagrs., bibliogr., indexes. Office of Farm Management, U. S. Dept. of Agriculture, Washington, D. C., 1917. 10½ x 13 inches.

In the words of the authors, "the purpose of this study is to show the geographic origin of the world's supply of food and of other important agricultural products and

to indicate briefly the climatic, soil, and economic conditions that account for the distribution of the crops and live stock of the world.'' The authors' efforts have culminated in an atlas of great merit. Although as an atlas showing production it is not original in its conception, yet it stands out as a distinctive contribution for both the professional geographer and the practical layman.

The maps with the exception of the first two, which are in colors, are all printed in black and white. The colored maps show land relief and precipitation, respectively, for the entire earth (Mercator projection). The former is based upon ''Physical Maps of the Continents'' by J. Paul Goode (Chicago, 1913-15) and the latter upon "Oxford Wall Maps of the Continent'' by A. J. Herbertson (1908-11) ''except the United States, which is based on data supplied by U. S. Weather Bureau.'' In the compilation of the black-and-white maps the authors have had the valuable assistance of many government specialists. Mr. Finch prepared the part relating to foreign countries while Mr. Baker prepared the sections relating to the United States.

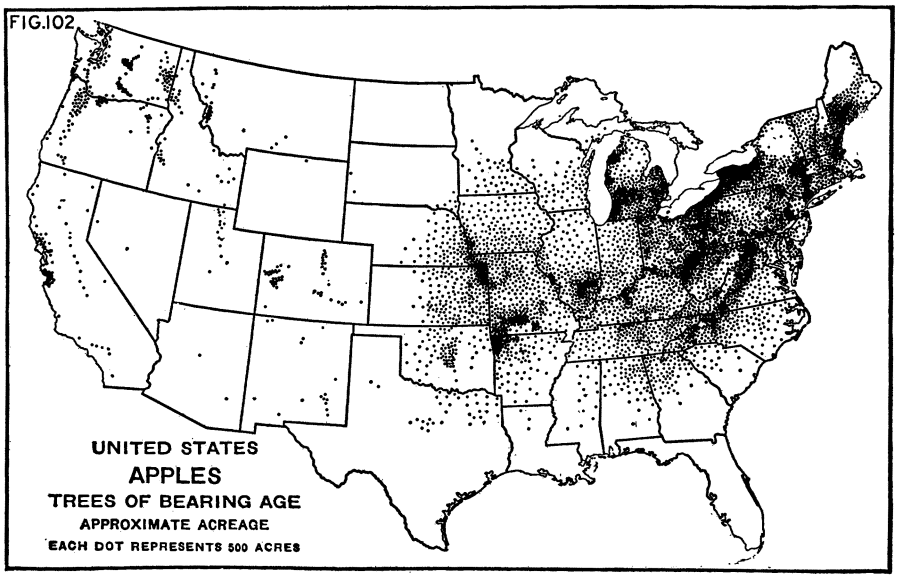

FIG. 1—Reproduction of a figure from Finch and Baker's "Geography of the World's Agriculture" to illustrate the dot method of distribution representation employed in that work.

The base maps are all in outline. On the Mercator maps are shown country boundaries, the states of the United States, and the provinces of Canada—all without names. In the case of individual countries, counties or their equivalent are drawn where the map is sufficiently large (nearly a full page) to allow of such detail. An identification map of the world gives the names of all countries and in the case of the United States and Canada the names of states and provinces respectively. Similar identification maps for the United States, Europe, Canada, India, and Argentina are given separately and on a larger scale. By reference to these maps the names of political divisions can easily be determined on the production maps.

The dot method is employed for showing distribution. By letting one dot represent a unit quantity and distributing the dots with reference to place of production, the authors have succeeded in presenting a kind of shade effect which portrays at once the relative intensity of production. Figure 102 on page 80, showing ''Trees of Bearing Age'' for apples, is reproduced here to illustrate the effectiveness of this cartographic scheme. This method serves further to displace generalizations and to give accuracy.

In each instance distribution is shown by areal values, excepting rice, cotton, tobacco, sugar, and coffee, for which dots represent actual production. Accompanying the areal maps are graphs of total production, so that, by combining the area represented by dots with the total production shown by the graph, one can ascertain very closely the density of production.

These maps help one visualize, as no other method can, the distribution and produc-

tion of the earth's vital agricultural products. It is unfortunate, however, that the authors should have failed to show parallels and meridians. That their significance is recognized is attested by the wheat map for Europe (p. 21), where the 50th parallel is indicated as the northern limit of wheat, and the sugar map of the world (p. 73), where the dividing line between the growing areas of beet and cane sugar is drawn. An indication of the latitude and longitude on the margins of the maps would have avoided marring their legibility and yet would have afforded some clue as to location and latitudinal climatic effects.

The treatment as a whole is by products rather than by countries. Among the points developed in most of the discussions are the place of origin of the product, the conditions under which it prospers with reference both to nature's controls and the influence of markets, and its practical value, including its relation to population. Statistical tables accompany the descriptive matter occasionally, and also special small maps to illustrate some phase of the subject deserving emphasis. Inset maps or diagrams as parts of the larger maps further illuminate the atlas. EUGENE VAN CLEEF

ARISTOTLE'S TREATISE ON METEOROLOGY

—— **Aristotelis meteorologicorum libri quattuor.** Recensuit, indicem verborum addidit F. H. Fobes. xlviii and 236 pp.; index. Harvard University, Cambridge, Mass., 1919. 9 x 6 inches.

Aristotle's treatise on meteorology is one of the great milestones in the development of the science of the earth's atmosphere. It remained for nearly two thousand years the standard text, and all the textbooks which were issued in Europe till the end of the seventeenth century were based exclusively upon it. Viewed in the light of the modern developments of meteorology, Aristotle's treatise is today inevitably very antiquated; but the important part it played throughout many centuries, as a guide, an inspiration, and a systematic presentation of important facts, entitles it, even now, to more than passing mention. In his epoch-making "Lehrbuch der Meteorologie," Schmid well said of Aristotle, "unverkennbar hat bereits der grosse Gelehrte des Alterthums, hat Aristoteles tiefahnend einige wichtige Momente, die jetzt erst zu ihrer Geltung gekommen sind, ergriffen; allein seine Schüler, Commentatoren und Nachfolger, unter den Griechen Theophrast, unter den Römern Plinius und Seneca, haben diese Anfänge nicht wesentlich entwickelt und erweitert" (p. 3).

Aristotle's work has been translated into French, English, and Italian, the only fairly recent translation being that in French (1863). A new English translation was promised by the Clarendon Press before the war.

Professor Fobes's new text of the four books of Aristotle's "Meteorology" is a scholarly piece of work, obviously first of all of very distinct importance to students of the classics, but of more than passing interest to students of meteorology. The Greek text of the four books of the "Meteorology," with the footnotes, occupies about 160 pages; somewhat over 100 pages are devoted to the preface, bibliographies, and index—all of which are in Latin. The publication of this volume inevitably leads to the expression of the hope that a new English translation of Aristotle's classic may not long be delayed. R. DEC. WARD

Note

With regard to the sentence "In quality of execution the maps are scarcely creditable to the India Survey," in the brief comment on Sheets 78 G, H, and J, of the topographic map of India, in the April, 1919, *Review* (Vol. 7, p. 280), Lieut.-Col. H. H. Turner, R. E., Superintendent, Map Publication, Survey of India, points out that the maps criticized are provisional issues only, and that they are reproductions by photography of old atlas sheets, pasted together to cover the area of a modern ¼-inch sheet (i. e. on the scale of 1:253,440). These provisional sheets will in time all be replaced by ¼-inch sheets prepared by modern surveys.